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## Patent claims

1. A mobile radio transmitting/radio receiving device (SE) having the following features:
  - 5 a) an electrically effective antenna body, in whose near field a dielectric body is mounted such that it can move,
  - b) the dielectric body can be moved in the near field of the antenna body such that the extent (M) to which the dielectric body and the electrically effective antenna body overlap in the near field is changed,
  - 10 c) means (VM) for adjusting the position of the dielectric body,
  - 15 d) means (EFM) for detecting at least one physical variable (EQ) which represents a function of the transmission/reception quality of the radio transmitting/radio receiving device (SE),
  - 20 e) a control device ( $\mu$ P) which is connected to the detection means (EFM) and controls the adjusting means (VM) by means of at least one control signal ( $U_{ST}$ ) as a function of the input variable (EQ) or of the input variables (EQ), until the extent of the overlap (M) ensures an optimum value for the physical variable (EQ) which represents a function of the transmission/reception quality of the radio transmitting/radio receiving device (SE).
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2. The mobile radio transmitting/receiving device (SE) as claimed in claim 1,
  - 30 characterized in that
  - a) the electrically effective antenna body is in the form of a rod antenna (SA),
  - b) the dielectric body is in the form of a hollow body (HK) with a slot which runs parallel to the longitudinal axis of the hollow body,
  - 35 c) the dielectric body can move along the longitudinal axis of the rod antenna (SA) such

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that the extent of the overlap (M) depends on the  
difference between the maximum electrically

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active antenna length ( $l_{ANT,MAX}$ ) of the rod antenna (SA) and a covered antenna length ( $l_{AB}$ ) of the rod antenna (SA) which is enclosed by the hollow body (HK).

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3. The mobile radio transmitting/receiving apparatus (SE) as claimed in claim 1, characterized in that

- 10 a) the electrically effective antenna body is in the form of a rod antenna (SA),
- b) the dielectric body is in the form of a rod (SB), and
- 15 c) the dielectric body can move parallel to the rod antenna (SA), on one longitudinal face of the rod antenna (SA), such that the extent of the overlap (M) is governed by the difference between the maximum electrically effective antenna length ( $l_{ANT,MAX}$ ) of the rod antenna (SA) and an antenna length ( $l_{AB}$ ), which is covered by the rod (SB) on
- 20 the longitudinal face, of the rod antenna (SA).

4. The mobile radio transmitting/receiving device (SE) as claimed in one of the preceding claims, characterized in that

25 the adjusting means (VM) is at least one electric motor.

5. The mobile radio transmitting/radio receiving device (SE) as claimed in claim 4,

30 characterized in that the electric motor is a stepping motor.

6. The mobile radio transmitting/radio receiving device (SE) as claimed in one of the preceding claims,

35 characterized in that the control device ( $\mu P$ ) is a processor having software which is designed to produce the control signal ( $U_{ST}$ ) or the control signals ( $U_{ST}$ ).

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7. The mobile radio transmitting/radio receiving device (SE) as claimed in one of claims 1 to 5, characterized in that the control device ( $\mu$ P) is in the form of a switching mechanism.

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8. The mobile radio transmitting/radio receiving device (SE) as claimed in one of the preceding claims, characterized in that the dielectric body (DK) is formed from ceramic.

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9. The mobile radio transmitting/radio receiving device (SE) as claimed in one of the preceding claims, characterized in that the control device ( $\mu$ P) is designed such that it sets the extent of the overlap (M) to a maximum value at the start of the adjustment of the extent of the overlap (M).

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10. The mobile radio transmitting/radio receiving device (SE) as claimed one of the preceding claims, characterized in that the detection means (EFM) are designed such that they detect the forward transmission power and/or backward transmission power of a transmitted signal.

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